CLAIMS

What is claimed is:

1. A method of switching control of a bus in a processor-based device, the method comprising the acts of:

electrically coupling a first bus controller to the bus;

generating a detection signal indicative of coupling of a second bus controller to the bus; and

automatically isolating the first bus controller from the bus in response to the detection signal.

2. The method as recited in claim 1, comprising the act of terminating the first bus controller.

3. The method as recited in claim 2, wherein the first bus controller is terminated in response to detection of the detection signal.

4. The method as recited in claim 1, wherein the bus comprises a plurality of traces disposed on a substrate, wherein the first bus controller is electrically coupled to a first segment of the plurality of traces, and wherein the second bus controller is electrically coupled to a second segment of the plurality of traces.

5. The method as recited in claim 4, comprising the act of terminating the second segment of the plurality of traces.

6. The method as recited in claim 5, comprising the act of electrically removing termination of the second segment of the plurality of traces in response to detection of the second bus controller.

7. The method as recited in claim 1, wherein the first bus controller is disposed on a first substrate, and the second controller is disposed on a second substrate, the second substrate being coupled to the first substrate, and wherein the act of generating a detection signal comprises the act of transmitting the detection signal from the second substrate to the first substrate.

8. The method as recited in claim 7, wherein the first substrate comprises an expansion port, and a first end of the cable is connected to the expansion port.

9. The method as recited in claim 1, wherein the bus comprises a SCSI bus.

10. The method as recited in claim 7, wherein the first substrate and the second substrate each comprise a printed circuit board.

11. The method as recited in claim 7, wherein the first substrate and the second substrate are disposed within a low profile server.

12. The method as recited in claim 1, wherein the act of electrically coupling comprises the act of coupling the first bus controller to the bus using a switch.

13. A method of switching control of a bus in a processor-based device, the processor-based device comprising a first bus controller and a bus disposed on a first substrate, wherein the

first bus controller is coupled to the bus and configured to control the bus, the method comprising the acts of:

electrically coupling a second bus controller to the bus;

detecting presence of the second bus controller; and

automatically switching control of the bus from the first bus controller to the second bus controller in response to detecting the presence of the second bus controller.

14. The method as recited in claim 13, wherein the act of detecting the presence of the second bus controller comprises the act of generating a detect signal when the second bus controller is electrically coupled to the bus.

15. The method as recited in claim 13, wherein the act of automatically switching control of the bus comprises the acts of:

isolating the first bus controller from the bus; and

terminating the isolated first bus controller.

16. The method as recited in claim 13, comprising the act of terminating the bus proximate the first bus controller.

17. The method as recited in claim 14, wherein the bus is terminated proximate the first bus controller in response to detecting the presence of the second bus controller.

18. The method as recited in claim 15, wherein the second bus controller is disposed on a second substrate coupled to the first substrate.

19. The method as recited in claim 18, wherein the first substrate comprises an expansion port, and the method comprises the act of terminating the bus proximate the expansion port.

20. The method as recited in claim 19, comprising the act of removing termination of the bus proximate the expansion port in response to detecting the presence of the second bus controller.

21. A method of switching control of a bus in a low profile server, the low profile server comprising a first bus controller, a bus, and an isolation device, wherein the first bus controller is configured to control the bus, and wherein the isolation device is configured to isolate the first bus controller from the bus, the method comprising the act of:

connecting a second bus controller to the bus to cause the isolation device to isolate the first bus controller from the bus.

22. The method as recited in claim 21, wherein the first bus controller is disposed on a first substrate, and wherein the second bus controller is disposed on a second substrate, and the act of connecting the second bus controller to the bus comprises the acts of:

disposing a cable in the low profile server, the cable comprising a first end and a second end;

connecting the first end of the cable to the first substrate; and

connecting the second end of the cable to the second substrate.

23. A processor-based device, comprising:

a processor;

a memory coupled to the processor; and

a first substrate, comprising:

a bus disposed on the first substrate;

a first bus controller disposed on the first substrate, the first bus controller being coupled to the processor and to the bus; and

an isolation device disposed on the first substrate, the isolation device being configured to couple the first bus controller to the bus, and to automatically isolate the first bus controller from the bus in response to detection of a second bus controller coupled to the bus.

24. The device as recited in claim 23, comprising an expansion port disposed on the first substrate and coupled to the bus, wherein the expansion port is connectable to a second substrate, and wherein the second bus controller is disposed on the second substrate.

25. The device as recited in claim 23, wherein the second bus controller is disposed on a second substrate, and the device comprises a cable having a first end and a second end, the first end being connectable to the first substrate, and the second end being connectable to the second substrate.

26. The device as recited in claim 24, comprising a termination device disposed on the first substrate, the termination device being configured to terminate the bus proximate the expansion port when the second bus controller is not coupled to the bus.

27. The device as recited in claim 23, comprising a termination device disposed on the first substrate, the termination device being configured to terminate the bus proximate the first bus controller in response to detection of the second bus controller.

28. The device as recited in claim 23, wherein the isolation device comprises an electronic switch.

29. The device as recited in claim 28, wherein the electronic switch comprises a transistor.

30. The device as recited in claim 23, wherein the processor and the memory are disposed on the first substrate.

31. The device as recited in claim 23, wherein the bus comprises a SCSI bus.

32. The device as recited in claim 31, comprising a SCSI device connectable to the SCSI bus.

33. The device as recited in claim 32, wherein the SCSI device comprises a hard disk drive.

34. The device as recited in claim 23, wherein the device comprises a low profile server.

35. A printed circuit board for a low profile server, the system board comprising:

a substrate;

a bus disposed on the substrate;

a first bus controller disposed on the substrate, the first bus controller coupled to the bus and configured to control the bus; and

an isolation device disposed on the substrate and configured to automatically isolate the first bus controller from the bus in response to detection of a second bus controller coupled to the bus.

36. The board as recited in claim 35, comprising a termination device disposed on the substrate and configured to terminate the first bus controller in response to detection of the second bus controller coupled to the bus.

37. The board as recited in claim 35, comprising an expansion port disposed on the substrate and coupled to the bus, wherein the second bus controller is coupled to the bus via the expansion port.

38. The board as recited in claim 37, comprising a termination device disposed on the substrate and configured to terminate the bus proximate the expansion port when the second bus controller is not coupled to the bus via the expansion port.

39. The board as recited in claim 35, wherein the isolation device comprises an electronic switch.

40. The board as recited in claim 39, wherein the electronic switch comprises a transistor.

41. The printed circuit board as recited in claim 35, comprising:

a memory disposed on the substrate; and

a processor disposed on the substrate, the processor being coupled to the memory and to the first bus controller.

42. The printed circuit board as recited in claim 35, wherein a SCSI device is coupled to the bus, the SCSI device being controllable by the first bus controller or the second bus controller.

43. The printed circuit board as recited in claim 42, wherein the SCSI device comprises a hard disk drive.

44. A method of manufacturing a device for switching control of a bus in a processor-based device, the method comprising the acts of:

providing a bus disposed on a substrate;

connecting an expansion port to the bus, the expansion port being configured for connection to a second bus controller;

disposing an isolation device on the substrate, the isolation device being connected to the bus; and

disposing a first bus controller on the substrate, the first bus controller being connected to the isolation device, the isolation device being configured to isolate the first bus controller from the bus when a second bus controller is connected to the expansion port.

45. The method as recited in claim 44, comprising the act of:

disposing a termination device on the substrate, the termination device being connected to the bus.

46. The method as recited in claim 45, wherein the termination device is connected to the bus proximate the first bus controller.

47. The method as recited in claim 46, wherein the termination device is configured to terminate the first bus controller when the second bus controller is connected to the expansion port.

48. The method as recited in claim 45, wherein the termination device is connected to the bus proximate the expansion port.

49. The method as recited in claim 48, wherein the termination device is configured to terminate the bus proximate the expansion port when the second bus controller is not connected to the expansion port.

50. The method as recited in claim 44, wherein the bus comprises a SCSI bus.

51. The method as recited in claim 44, wherein the first bus controller comprises a SCSI bus controller.

52. A method of manufacturing an expansion card connectable to a system controller board having a system bus controller configured to control the bus, and having an isolation device configured to isolate the system bus controller from the bus in response to a detect signal, the method comprising the acts of:

disposing an expansion bus controller on a substrate, the expansion bus controller being configured to control a bus;

disposing a detect signal generator on the substrate;

connecting the detect signal generator to the first expansion connector; and

disposing a first expansion connector on the substrate, the first expansion connector connected to the expansion bus controller and the detect signal generator,

wherein the first expansion connector is configured to couple with a cable, the cable having a first end connectable to the first expansion connector and a second end connectable to a system controller board, and

wherein the detect signal generator is configured to generate a detect signal detectable at the second end of the cable when the expansion board is connected to the system board via the cable.

53. A method of switching between a first device and a second device connectable to a communications medium in a processor-based device, the method comprising the acts of:

electrically coupling a first device to the communications medium;

generating a detection signal indicative of coupling of a second device to the communications medium; and

automatically isolating the first device from the communications medium in response to the detection signal.

54. The method as recited in claim 53, wherein the communications medium comprises a point-to-point interconnect.

55. The method as recited in claim 53, wherein the communications medium comprises shared bus.